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Nack Suppression for Multicast Protocols in Mostly
One-Way Networks

ABSTRACT OF THE DISCLOSURE:

5   In a multicasting system content is multicast from a
sender to a plurality of receivers over a data. network.
Each receiver independently determines whether it is
missing elements or packets of the content. Receivers
having missing content each initiate a random timer. The
10   receiver having the shortest random interval unicasts a
negative acknowledgement to the sender, which immediately
multicasts the negative acknowledgement to the other re-
ceivers. All other receivers having the same missing
packet thereupon suppress their own negative acknowledge-
15   ments as to that packet. A repair transmission is then
multicast by the sender to all receivers. The random in-
tervals have upper and lower bounds according to the
round trip transmission time and the size of the largest
missing data element.